

WHAT IS CLAIMED IS:

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1. In a PCM modem system including an analog modem, a digital modem, a local analog loop, a central office, a digital network and a digital modem, a method for controlling the transmit power of the analog modem, comprising the steps of:

detecting the transmit power level of the analog modem; and,

adjusting the transmit power level of the analog modem in accordance with the difference between the detected transmit power level and a desired transmit power level.

2. The method of Claim 1, wherein the analog modem sets its own transmit power level.

3. The method of Claim 1, wherein the transmit power level of the analog modem is set by the digital modem.

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4. The method of Claim 3, wherein the PCM modem system adjusts the power level of the analog modem by transmitting mapping parameters including the equivalence classes used in the analog modem and wherein the transmit power level is proportional to the number of equivalence classes.

5. The method of Claim 4, wherein the digital modem sets the analog modem transmit power by changing the number of equivalence classes employed.

6. The method of Claim 5, wherein the digital modem estimates the transmit power of the analog modem during a startup mode.

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7. The method of Claim 6, and further including the step of transmitting the difference between the detected power level and the desired power level to the digital modem for use by the digital modem in changing the number of equivalence classes employed, thus to adjust the power level of the analog modem transmitter.

8. The method of Claim 1, wherein the adjustment of the transmit power level of the analog modem is such as to maintain the transmit power level within FCC set limits:

9. The method of Claim 1, wherein the adjusted transmit power level at the analog modem optimizes the PCM modem system by minimizing echo power to minimize noise components due to imperfect echo cancellation and by minimizing non-linearities and downstream performance degradation.

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10. In a PCM modem system including an analog modem, a digital modem; a local analog loop, a central office, a digital network and a digital modem, a method for controlling the transmit power of either of the modems, comprising the steps of:

detecting the transmit power level of a modem; and,

adjusting the transmit power level at the modem in accordance with the difference between the detected transmit power level at the modem and a desired transmit power level.

11. The method of Claim 10, wherein the transmit power level of the modem is set by the other of the modems.

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